

# Research Protocol

Version Number 1.0 and Date 09 July 2018

---

Study Short Title: **ACCOLaDE**

Study Full Title: **AntibaCterial presCribing & OraL Health practice: The Leeds Dental Extraction Study**

Sponsor Name: **UNIVERSITY OF LEEDS**

Sponsor Number: **DT17/103574**

ISRCTN: **(to apply)**

---

Details of previous amendments

---

## Study Investigators

Ashna Chavda  
Dental Research Nurse  
School of Dentistry  
University of Leeds  
Email: [a.chavda@leeds.ac.uk](mailto:a.chavda@leeds.ac.uk)

Gillian Dukanovic  
Dental Research Nurse  
School of Dentistry  
University of Leeds  
Email: [g.dukanovic@leeds.ac.uk](mailto:g.dukanovic@leeds.ac.uk)

## Key contacts

**Main Study Investigators: Ashna Chavda & Gillian Dukanovic**  
School of Dentistry  
Faculty of Medicine & Health  
University of Leeds  
Level 6 Worsley Building  
Clarendon Way, Leeds, LS2 9LU

Email: [a.chavda@leeds.ac.uk](mailto:a.chavda@leeds.ac.uk) - Tel: 0113 34 39400  
[g.dukanovic@leeds.ac.uk](mailto:g.dukanovic@leeds.ac.uk) - Tel: 0113 34 36127

### **Jenny Boards**

DenTCRU Operations Manager  
Email: [J.A.Boards@leeds.ac.uk](mailto:J.A.Boards@leeds.ac.uk)

**Professor Sue Pavitt** - Chief Investigator for REC submission  
Director of DenTCRU  
Email: [S.Pavitt@leeds.ac.uk](mailto:S.Pavitt@leeds.ac.uk)

**Study Co-Advisors at the School of Dentistry**  
University of Leeds, Clarendon Way, Leeds, LS2 9LU  
are:

**Dr Jianhua Wu**  
DenTCRU Statistician

**Wendy Thompson**  
General Dental Practitioner (GDP) and PhD Student

**Peter Day**  
Associate Professor in Paediatric Dentistry

**Jinous Tahmassebi**  
Associate Professor in Paediatric Dentistry

**SIGNATURE PAGE**

The undersigned confirm that the following protocol has been agree and accepted and that the Main Study Investigators agree to conduct the study in compliance with the approved protocol and will adhere to the principles outlines in the Declaration of Helsinki, the Sponsor’s Standard Operation Procedures (SOPs) and other regulatory requirements.

The Main Study Investigators agree to ensure that the confidential information contained in this document will not be used for any other purpose other than the evaluation or conduct of the investigation without the prior written consent of the Sponsor.

The Main Study Investigators also confirm that they will make the findings of the study publically available through publication or other dissemination tools without any unnecessary delay and that an honest accurate and transparent account of the study will be given; and that any discrepancies from the study as planned in this protocol will be explained.

**For and on behalf of the Study Sponsor:**

Signature ..... Date: ...../...../.....

Name (please print) .....

Position:.....{Faculty Head of Research & Innovation Support}....

**Main Study Investigators:**

Signature ..... Date: ...../...../.....

Name (please print) .....

Signature ..... Date: ...../...../.....

Name (please print) .....

## 1.0 Study Summary

<b>GENERAL INFORMATION</b>	
Short Title	ACCOLaDE
Full Title	<b>AntibaCterial presCribing &amp; OraL Health practice: The Leeds Dental Extraction Study</b>
Sponsor	University of Leeds
Sponsor ID	<b>DT17/103574</b>
REC No.	To add
Main Investigators	Ashna Chavda and Gillian Dukanovic
Co-ordinating Centre	DenTCRU, Leeds School of Dentistry
<b>TRIAL INFORMATION</b>	
Indication	To explore the experience of patients undergoing tooth extraction at Leeds Dental Institute (LDI) in relation to antibiotic medication, dental anxiety and oral health practices
Design	Research questionnaire survey
Objectives	To better understand the increasing numbers of patients attending the Leeds Dental Institute (LDI) for extractions and: <ul style="list-style-type: none"> <li>• Whether patients were managed by antibiotic only treatment plans.</li> <li>• Their level of dental anxiety</li> <li>• Their underlying tooth brushing behaviours and oral health practices</li> </ul>
<b>TRIAL TIMELINES</b>	
Expected start date	June 2018
End of Trial Definition	Last Patient Last Visit
Expected completion date	June 2019
<b>TRIAL SUBJECT INFORMATION</b>	
Number of trial subjects	50
Age group of trial subjects	Parents/Guardians of children from 5yrs to 12 years, children aged 13-15 and adults (no upper age limit)
Inclusion criteria	<ul style="list-style-type: none"> <li>a) Adult patients undergoing extraction of one or more teeth</li> <li>b) Parents/Guardians of children aged 5-12 years old undergoing extraction of one or more teeth</li> <li>c) Patients aged 13-15 undergoing extraction of one or more teeth</li> <li>d) Patients and Parents/Guardians who are willing to give informed consent or assent to complete questionnaires</li> </ul>
Exclusion criteria	<ul style="list-style-type: none"> <li>(a) Patients, parents/guardians unable or unwilling to provide informed consent</li> <li>(b) Parents/Guardians of patients aged less than 5 years old</li> <li>(c) Patients or parents who are unable to communicate directly with the health person carrying out the treatment</li> </ul>

## **2.0 Introduction**

### **2.1 Background and Rationale for the Study**

Professor Dame Sally Davies, the UK Chief Medical Officer has issued stark warnings about the global catastrophe faced if the threat of antimicrobial resistance (AMR) is not addressed. AMR has risen alarmingly over the last 40 years and inappropriate use of antibacterials/antimicrobials is a key driver. Dentists in England prescribe antibacterial drugs more than any other medication. Some 3.7 million dental prescriptions for antibacterial medicines were dispensed in England during 2014. Of all NHS antibacterial drug prescriptions, 5% are attributed to general dental practice and overprescribing by dentists has been widely reported. Clear, evidence based guidance for appropriate antibacterial prescribing in general dental practice is available. Antibacterial prescriptions are only indicated in the presence of systematic spread of bacterial infection which is easily identified by dentists during appointments given sufficient time and patient compliance. Antibacterial-only treatment plans are generally inappropriate although may be indicated if a patient requires referral for sedation or to an oral surgeon. Reducing antibacterial prescribing by dentists has an important part to play in the UK AMR Strategy to slow the development and spread of resistance.

University of Leeds (UoL) has a portfolio of projects exploring antibacterial drugs and dentistry. The APTiTUDe project<sup>1</sup> is developing a complex intervention to address professional and patient behaviours to lower the prescribing rates of antibacterial medication by dentists. By identifying key behaviours of dentists, other members of the dental team (e.g. dental nurses and receptionists) and patients, this project will establish a logic model to underpin the development of the complex intervention. This ACCOLADE project will provide valuable information for the NIHR awarded APTiTUDe project in relation to patient experience of antibacterial medication in dentistry. It will include exploration of the observation that increasing numbers of patients are being referred into secondary care (Leeds Dental Institute, LDI) for extractions following antibacterial-only treatment plans in general dental practice.

Teeth are extracted for various reasons including planned extractions of healthy teeth (e.g. as part of orthodontic treatment or impacted wisdom teeth) and urgent extraction of diseased teeth (for example due to an abscess) during unscheduled treatment. The UoL School of Dentistry's HTA-compliant Skeletal Tissues Research Tissue Bank (the "Bank") collects extracted teeth from consented participants; donated teeth are anonymised, stored and used for a variety of research purposes. By comparing the questionnaire responses of all consenting participants undergoing dental extraction (irrespective of reason) or involved with a child undergoing this procedure, this project aims to explore attitudes, knowledge and experience of participants about antibacterial medication and their use to treat dental disease, the amount of dental anxiety in those referred and their general oral health practice. The collected data will underpin several clinical translational projects such as Dr Wendy Thompson's APTiTUDe project, Dr Peter Day's work on behavioural interventions for tooth brushing and Dr Jinous Tahmassebi's work on child dental anxiety and extraction methods.

### **3.0 Aims and Objectives**

To explore the experience of patients undergoing tooth extraction at the Leeds Dental Institute in relation to antibiotic medication, dental anxiety and oral health practice.

---

<sup>1</sup> Wendy Thompson's Registered PhD, NIHR Doctoral Fellowship [Short Title: APTiTUDe – Antimicrobial Prescribing: Towards a reduction during Urgent Dental care in England.] Enabling antimicrobial prescribing reduction during urgent primary dental care in England: Developing a complex intervention for behaviour change of professionals and patients.

This study will quantify and better understand the increasing numbers of patients attending the Leeds Dental Institute (LDI) for extractions and:

- 1) Whether patients were managed by antibiotic only treatment plans.
- 2) Their level of dental anxiety
- 3) Their underlying tooth brushing behaviours and oral health practices.

#### **4.0 Trial Design**

Patients who have attended pre assessment appointments at Leeds Dental Institute will be identified by the care team when booking appointments for day case admission for their extraction procedure. The care team will send a separate invitation letter explaining this research and enclosing a copy of the relevant ACCOLaDE Participant Information Sheet to the patient for consideration. This information is sent to the patient up to two weeks prior to the treatment date.

On the morning of the treatment visit, patients and parents/guardians will be approached by a member of the clinical care team and asked if they wish a member of the ACCOLaDE research team to discuss the study. If they wish to consider the ACCOLaDE study a member of the research team will be introduced to them. Patients and relatives will have the opportunity to ask any questions they want to and if they are willing to take part in this research, they will be consented (or assented where applicable) to this study. Patients willing to donate teeth for the Skeletal Tissue Bank may also be approached for the ACCOLaDE study.

Consented participants will be given the 3 paper questionnaires to complete prior to their dental treatment taking place. The questionnaires will take about 15 minutes to complete. The research staff and care team will be on hand to offer any reading support to any participant who may need assistance whilst completing these questionnaires.

#### **4.1 Endpoints**

##### **4.1.1: Primary Endpoint**

To have a better understanding of previous antibiotic management, the anxiety levels and basic oral health demographics and drivers of those requiring tooth extractions.

##### **4.1.2: Secondary Endpoint(s)**

- 1) To produce evidence by collating information on previous antibiotic use.
- 2) To produce evidence of dental anxiety levels from collating the anxiety scores from completed questionnaires.
- 3) To produce evidence to elucidate on the underlying tooth brushing behaviours and oral health practice in those patients requiring tooth extraction.

#### **5.0 Trial Subject Selection**

##### **5.1 Eligibility Criteria**

##### **5.1.1: Inclusion Criteria**

- a) Adult patients undergoing extraction of one or more teeth

- b) Parents/Guardians of children aged 5-12 years old undergoing extraction of one or more teeth
- c) Patients aged 13-15 undergoing extraction of one or more teeth
- d) Patients and Parents/Guardians who are willing to give informed consent or assent to complete questionnaires

#### **5.1.2: Exclusion Criteria**

- a) Patients, parents/guardians unable or unwilling to provide informed consent
- b) Parents/Guardians of patients aged less than 5 years old
- c) Patients or parents who are unable to communicate directly with the health person carrying out the treatment

### **5.2 Recruitment Processes**

#### **5.2.1: Recruitment**

Patients will have received a copy of the relevant ACCOLaDE Participant information sheet in the post prior to their day case admission for treatment. This will include detailed information about the rationale, design of the study. Following information provision, patients will be given the opportunity to discuss the trial with their family and on the day of treatment can discuss this with a member of the clinical care team and the researchers before they are asked whether they would be willing to take part or not. This process will be clearly documented in their electronic patient record by the clinical care team. All participants will have had at least 24 hours to consider their participation.

#### **5.2.2: Consent**

Patients and parents/guardians will be formally assessed for eligibility and invited to provide informed, written consent. The right of the patient or parent/guardian to refuse consent without giving reasons will be respected. Further, the patient or parent/guardian will remain free to withdraw from the study at any time without giving reasons and without prejudicing any further treatment for them or their child. A copy of the consent will be given to the participant, one filed in the Trial Master File, and one filed in the electronic patient records. The written consent will be taken by a member of the research team designated on the study staff authorisation / delegation log.

#### **5.2.3: Participants who Withdraw Consent**

All participants will remain free to withdraw from the study at any time without giving reasons and without prejudicing any further treatment. However participants must notify the researchers up to the 2 weeks following their tooth extraction appointment that they want to withdraw their study data. After this time the anonymised questionnaires will be used as part of the study results and may no longer be individually identifiable.

#### **5.2.4: Definition for the End of Trial**

Last patient last visit

### **6.0 Data Collection, Source Data and Confidentiality**

#### **6.1: General**

All information collected during the course of the trial will be kept strictly confidential. Information will be held securely on paper and electronically at the Dental Translational Clinical Research Unit (DenTCRU), at the University of Leeds.

Dental Translational Clinical Research Team will comply with all aspects of the Data Protection Act 2018 and operationally this will include:

- consent from patients/participants to record personal details including name, date of birth.
- appropriate storage, restricted access and disposal arrangements for patient personal and clinical details
- consent from participants for access to their study records by responsible individuals from the research staff, the sponsor or from regulatory authorities, where it is relevant to trial participation
- consent from participants for the data collected for the trial to be used to develop new research.

## **6.2 End of Trial Report**

Upon completing the trial, an end of trial notification will be submitted to the Ethical Committee and a trial report will be given to the funder of this research. A copy of this end of trial notification and trial report will be submitted to the Sponsor's office.

## **6.3 Archiving**

At the end of the trial, data will be securely archived at Leeds Dental School for a minimum of 5 years. Arrangements for confidential destruction will then be made. Anonymised study data collected from the questionnaires may be kept and shared with other researchers to help future research projects. No study data may be destroyed without first obtaining written permission from the Sponsor.

## **7.0 Statistical Analysis**

A brief descriptive and summary analysis regarding patient demographics and questionnaires will be carried out for consented patients.

## **8.0 Ethical Considerations**

The trial will be performed in accordance with the recommendations guiding ethical research involving human subjects adopted by the 18th World Medical Assembly, Helsinki, Finland, 1964, amended at the 48<sup>th</sup> General Assembly, Somerset West Republic of South Africa, October 1996. Informed written consent will be obtained from the patients prior to registration into the study. The right of a patient to refuse participation without giving reasons must be respected. The patient must remain free to withdraw at any time from the study without giving reasons and without prejudicing his/her further treatment. The study will be submitted to and approved by a main Research Ethics Committee (REC) prior to entering patients into the study.

## **9.0 Statement of Indemnity**

This study is sponsored by The University of Leeds and The University of Leeds will be liable for negligent harm caused by the design of the study. The NHS has a duty of care to patients treated, whether or not the patient is taking part in a clinical study, and the NHS remains liable for clinical negligence and other negligent harm to patients under this duty of care.

## **10. Publication Policy**

Dissemination of the results through publication in academic literature and the oral health SMILE AIDER (patient and public involvement group) forum. A summation with anonymised data of the main findings of the research will be disseminated via audio-visual screens in

Leeds Dental Institute so attending patients can see the results. Study participants may contact the researchers to receive a copy of the summation as participant address details will not be kept.

## 12. References

Children's Dental Health Survey 2013. Technical Report: England, Wales and Northern Ireland

The English antibiotic awareness campaigns: did they change the public's knowledge of and attitudes to antibiotic use? Clodna A. M. McNulty, Tom Nichols, Paul J. Boyle, MarkWoodhead and Peter Davey  
J Antimicrob Chemother 2010; 65: 1526–1533

Modified Dental Anxiety Scale (MDAS): associated references:

*Psychological Reporis*, 1998,83, 1179-1186.

PRELIMINARY VALIDATION AND RELIABILITY OF THE MODIFIED CHILD DENTAL ANXIETY SCALE ' H-M. WONG G. M. HUMPHRIS

HUMPHRIS GM, MORRISON T and LINDSAY SJE (1995) 'The Modified Dental Anxiety Scale: Validation and United Kingdom Norms' Community Dental Health, 12, 143-150.

- The original paper with UK norms, reliability and validity information, and justification for the 19 'cut off' score

GREEN RM, HUMPHRIS GM, LINDSAY SJE, MELLOR AC, MILLAR K, SIDEBOTHAM B (1997) 'Minor psychiatric morbidity, pain and fear in patients in general dental practice' Community Dentistry and Oral Epidemiology, 25, 187-188.

- Further paper with details of use of the MDAS in a dozen practices around the UK.

HUMPHRIS GM, FREEMAN RE, TUTTI H, DESOUZA V (2000) 'Further evidence for the reliability and validity of the Modified Dental Anxiety Scale' International Dental Journal 50,367-370.

- Details of MDAS scores in a number of countries following translation into native language of country concerned. Further reliability and validity information.

DAILEY Y-M, HUMPHRIS GM, LENNON MA (2001) 'The use of dental anxiety questionnaires: a survey of a group of UK dental practitioners' British Dental Journal 190(8) 450-453.

- Survey of specialists in dental anxiety management and their use of formal psychometric instruments in their daily practice.

DAILEY YM, HUMPHRIS GM, LENNON MA (2002) 'Reducing patient's state anxiety in general dental practice. A randomised controlled trial' Journal of Dental Research 81(5): 319-322. (Abstract chosen for reprinting in the British Dental Journal under 'Behavioural Science' banner, vol 193(4):215).

- Study which shows the benefit to dental visitors of completing the MDAS and giving this to the dentist

HUMPHRIS GM, CLARKE HMM, FREEMAN R. (2006) Does completing a dental anxiety questionnaire increase anxiety? A randomised controlled trial with adults in general dental practice. British Dental Journal,

- Study shows that giving the MDAS to patients attending their general practitioner does not increase state anxiety in patients immediately prior to seeing their dentist

FREEMAN R, CLARKE HMM, HUMPHRIS GM. (2007) Conversion Tables for the Corah and Modified Dental Anxiety Scales. *Community Dental Health* Mar;24(1):49-54

- Conversion tables and regression equations presented so that investigators can compare their results to other published sources regardless of whether they adopt Corah's DAS or the MDAS

HUMPHRIS G, HULL P. (2007) Do dental anxiety questionnaires raise anxiety in dentally anxious adult patients? A two wave panel study. *Primary Dental Care* Jan;14(1):7-11

- Using the MDAS with Dental Access Patients. No significant increase in anxiety following MDAS completion.

YUAN S, FREEMAN R, LAHTI S, LLOYD-WILLIAMS F, HUMPHRIS G. (2008) Some psychometric properties of the Chinese version of the Modified Dental Anxiety Scale with cross validation. *Health and Quality of Life Outcomes* Mar 25;6(1):22 (free copy: <http://www.hqlo.com/content/6/1/22> )

- Use of confirmatory factor analysis and structural equation modelling to show validation of a new Chinese language version (sample within Beijing) with comparisons to an English sample from the North-west of England

NEWTON JT, EDWARDS JC. (2005) Psychometric properties of the modified dental anxiety scale: an independent replication. *Community Dent Health*. Mar;22(1):40-2.

- Study with 135 dental patients confirming reliability and some aspects of validity of the MDAS in England

ILGUY D, ILGUY M, DINCER S, BAYIRLI G. (2005) Reliability and validity of the Modified Dental Anxiety Scale in Turkish patients. *J Int Med Res*. Mar-Apr;33(2):252-9.

- Psychometrics of the Turkish version of the MDAS (294 dental patients)

See Hyperlink: <http://medicine.st-and.ac.uk/supplemental/humphris/dentalAnxiety.htm>

COOLIDGE T, CHAMBERS M, GARCIA LJ, HEATON LJ, COLDWELL SE Psychometric properties of Spanish-language adult dental fear measures. *BMC Oral Health* 2008, 8:15

- Psychometrics of the Spanish version of the MDAS (various convenience samples)

See Hyperlink: <http://www.biomedcentral.com/1472-6831/8/15>

COOLIDGE T, ARAPOSTATHIS KN, EMMANOUIL D, DABARAKIS N, PATRIKIOU A, ECONOMIDES N, KOTSANOS N. Psychometric properties of Greek versions of the Modified Corah Dental Anxiety Scale (MDAS) and the Dental Fear Survey (DFS). *BMC Oral Health*. 2008 Sep 30;8:29.

- Psychometrics of the Greek version of the MDAS (two convenience samples, one from private practice and the other from a dental school)

See Hyperlink: <http://www.biomedcentral.com/1472-6831/8/29>

HUMPHRIS GM, DYER T, ROBINSON P. The Modified Dental Anxiety Scale: UK population norms in 2008 with further psychometrics and effects of age. *BMC Oral Health*. 2009

- New norms for UK derived from telephone survey representative sample (n=963) questioned in 2008, including respondents from all countries within UK. Includes a table of percentiles for practitioners to estimate the percentage of people who would score the

level of dental anxiety that a particular patient may present with. This table gives greater precision as estimates are provided by sex and three age bands.

See Hyperlink: <http://www.biomedcentral.com/1472-6831/9/20>

- M T Hosey, L M D Macpherson, P Adair, C Tochel, G Burnside and C Pine. Dental anxiety, distress at induction and postoperative morbidity in children undergoing tooth extraction using general anaesthesia. British Dental Journal 2006: 200:39-43

See Hyperlink:

[https://www.researchgate.net/publication/7356249\\_Dental\\_anxiety\\_distress\\_at\\_induction\\_and\\_postoperative\\_morbidity\\_in\\_children\\_undergoing\\_tooth\\_extraction\\_using\\_general\\_anaesthesia](https://www.researchgate.net/publication/7356249_Dental_anxiety_distress_at_induction_and_postoperative_morbidity_in_children_undergoing_tooth_extraction_using_general_anaesthesia)

- M T Hosey, A J Asbury, A W Bowman, K Millar, K Martin, T Musiello and R Welbury. The effect of transmucosal 0.2 mg/kg midazolam premedication on dental anxiety, anaesthetic induction and psychological morbidity in children undergoing general anaesthesia for tooth extraction: British Dental Journal 2009

See Hyperlink: <https://www.ncbi.nlm.nih.gov/pubmed/1957499>

### **13. Appendices**

#### **Appendix A – Participant Information Sheets and Consent Forms**

- i) ACCOLaDE Participant Information Sheet and Consent Form – Adult
- ii) Parent/Guardian Information Sheet and Consent Form
- iii) ACCOLaDE Participant Information Sheet and Consent Form – Young Persons aged 13-15 years

#### **Appendix B – Questionnaires**

- i) MCDAS (Wong et al., 1998) Version 1 dated 17/10/2016
- ii) Antimicrobial Survey
- iii) WHO Oral Health Questionnaire for Adults
- iv) WHO Oral Health Questionnaire for Children